
BURN CRITERIA AND DESTINATION POLICY

PURPOSE

To ensure the appropriate destination of patients sustaining burn injuries.

AUTHORITY

Health and Safety Code Sections 1797.220, 1797.222 & 1798
California Code of Regulations, Title 22, Division 9, Sections 100144, 100304, 100107, 100128, 100175A2

DEFINITIONS

Adult Patients: a person appearing to be ≥ 15 years of age.

Pediatric Patients: a person appearing to be < 15 years of age.

Burn Patients: patients meeting ICEMA's burn classifications, minor, moderate or major.

Critical Trauma Patients (CTP): patients meeting ICEMA's Critical Trauma Patient Criteria.

Trauma Hospital: a licensed general acute care hospital designated by ICEMA's Governing Board as a trauma hospital in accordance with State laws and regulations.

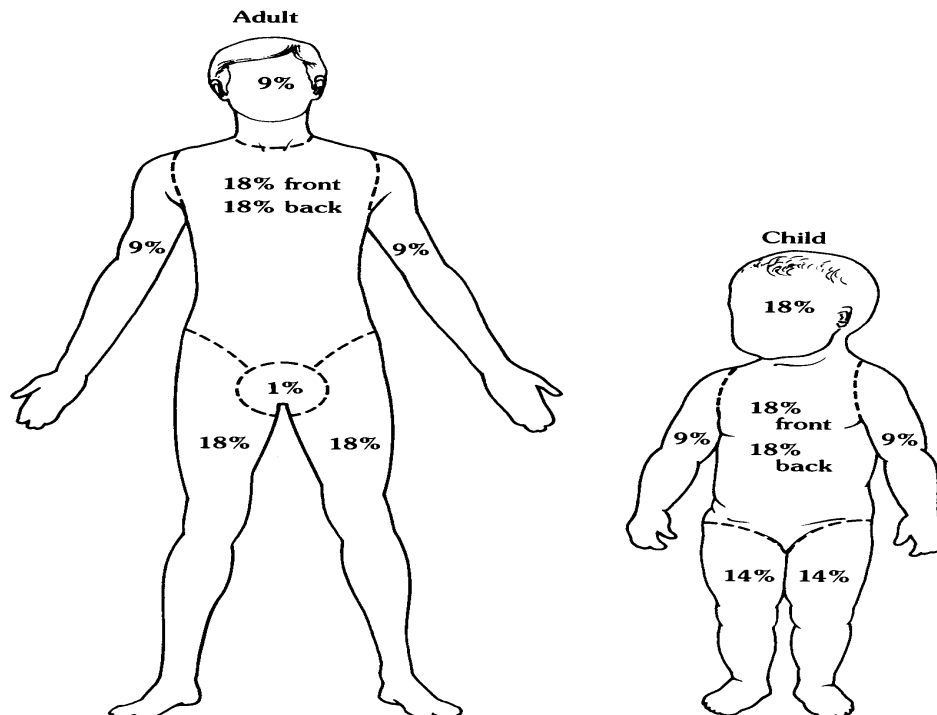
POLICY

A. TRANSPORTATION

1. Burn patients meeting minor or moderate classifications will be transported to the closest most appropriate receiving hospital.
2. Burn patients meeting major burn classification will be transported to the closest most appropriate burn center (in San Bernardino County contact ARMC).
3. Burn patients meeting the physiologic or anatomic criteria for CTP will be transported to the most appropriate trauma hospital, Refer to Protocol #8005, Trauma Triage Criteria and Destination Policy.
4. Pediatric burn patients identified as a CTP will be transported to a pediatric trauma hospital when there is less than a twenty (20) minute difference in transport time to the pediatric trauma hospital versus the closest trauma hospital.
5. When estimated transport to the most appropriate trauma hospital (for patients identified as a CTP) is thirty (30) minutes or less, ground ambulance shall be the primary means of transport. EMS Aircraft transport shall not be used unless ground transport is expected to be greater than thirty (30) minutes and EMS Aircraft transport is expected to be significantly more expeditious than ground transport. If an EMS aircraft is dispatched, adherence to the Aircraft Destination Policy #14054 (in San Bernardino County) is mandatory.
6. Burn patients with respiratory compromise, or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.
7. Hospital trauma diversion status: Refer to Protocol #14051 San Bernardino County Hospital Diversion Policy.
8. Paramedics may contact the base hospital or trauma base hospital for destination consultation on any patient that does not meet any of the above criteria, but who, in the paramedic's opinion, would be more appropriately serviced by direct transport to a burn center.

B. BURN CLASSIFICATIONS

ADULT BURN CLASSIFICATION CHART	PEDIATRIC BURN CLASSIFICATION CHART	DESTINATION
<u>MINOR</u> – ADULT <ul style="list-style-type: none"> • < 10% TBSA • < 2% Full Thickness 	<u>MINOR</u> - PEDIATRIC <ul style="list-style-type: none"> • < 5% TBSA • < 2% Full Thickness 	CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL
<u>MODERATE</u> – ADULT <ul style="list-style-type: none"> • 10 - 20% TBSA • 2 - 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease) 	<u>MODERATE</u> - PEDIATRIC <ul style="list-style-type: none"> • 5 – 10% TBSA • 2 – 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease) 	CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL
<u>MAJOR</u> – ADULT <ul style="list-style-type: none"> • >20% TBSA burn in adults • > 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints 	<u>MAJOR</u> - PEDIATRIC <ul style="list-style-type: none"> • > 10% TBSA • > 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints 	CLOSEST MOST APPROPRIATE BURN CENTER In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)

“Rule of Nines”

C. EXCEPTIONS

The burn patient who presents with the following:

Airway Stabilization: <u>Transport to the closest most appropriate receiving hospital for airway stabilization when the patient:</u>	<ul style="list-style-type: none"> • has respiratory compromise, or potential for compromise
Transport to the closest most appropriate receiving hospital when the patient:	<ul style="list-style-type: none"> • has deteriorating vital signs • is pulseless and apneic
EMS Aircraft Indications: <u>An EMS aircraft may be dispatched for the following events:</u>	<ul style="list-style-type: none"> • MCI • Prolonged extrication time (> twenty (20) minutes) • Do Not Delay Patient Transport waiting for an enroute EMS aircraft
EMS Aircraft Transport Contraindications: <u>The following are contraindications for EMS aircraft patient transportation:</u>	<ul style="list-style-type: none"> • Patients contaminated with Hazardous Material who cannot be decontaminated and who pose a risk to the safe operations of the EMS aircraft and crew • Violent patients with psychiatric behavioral problems and uncooperative patients under the influence of alcohol and/or mind altering substances who may interfere with the safe operations of an EMS aircraft during flight • Stable patients • Ground transport is < 30 minutes • Traumatic cardiac arrest • Other safety conditions as determined by pilot and/or crew
Remote Locations:	<ul style="list-style-type: none"> • Remote locations may be exempted from specific criteria upon written permission from the EMS Medical Director

D. CONSIDERATIONS

1. Scene time should be limited to ten (10) minutes under normal circumstances.
2. Burn patients with associated trauma, in which the burn injury poses the greatest risk of morbidity or mortality should be **considered** for transport to the closest most appropriate Burn Center. Trauma base hospital contact shall be made.

E. RADIO CONTACT

1. If not contacted at scene, the receiving trauma hospital must be notified as soon as possible in order to activate the trauma team.
2. For patients meeting Trauma Triage Criteria (Physiologic, Anatomic, Mechanism of Injury, and/or Age and Co-Morbid Factors), a trauma base hospital shall be contacted in the event of patient refusal of assessment, care, and/or transportation.
4. In Inyo and Mono Counties, the assigned base hospital should be contacted for CTP consultation.

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ICEMA Medical Director Date

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San Bernardino Co. Health Officer Date

Inyo Co. Health Officer Date

SIGNATURE ON FILE

SIGNATURE ON FILE

Mono Co. Health Officer Date

ICEMA Executive Director Date

ADULT BURNS
15 Years of Age and Older

Any burn patient meeting Burn Classifications requires expeditious packaging, communication and transportation to the closest most appropriate receiving hospital.

FIELD ASSESSMENT/TREATMENT INDICATORS

Burn Criteria and Destination Policy #9001

ADULT TREATMENT PROTOCOL: BURNS

Base Hospital Contact Shaded in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<ul style="list-style-type: none">• Assess environment and extrication as indicated• Break contact with causative agent (stop the burning process)• Ensure patent airway, protecting cervical spine as indicated• Remove clothing and jewelry quickly, if indicated• Ensure thorough initial assessment• Oxygen and/or ventilate as needed, O₂ saturation (if BLS equipped)• Axial spinal stabilization as appropriate• Treat other life threatening injuries• Keep patient warm• Estimate % TBSA burned and depth using the "Rule of Nines"<ul style="list-style-type: none">◦ An individual's palm represents 1% of TBSA and can be used to estimate scattered, irregular burns• Transport to ALS intercept or to the closest most appropriate receiving hospital• Assemble necessary equipment for ALS procedures under direction of EMT-P and/or assemble pre-load medications as directed, excluding controlled substances	<ul style="list-style-type: none">• Advanced airway as indicated <p>Airway Stabilization: Burn patients with respiratory compromise, or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.</p> <ul style="list-style-type: none">• Monitor ECG• IV/IO Access: Moderate to Severe Burns. Warm IV fluids when available. <p>Unstable: BP<90mmHG and/or signs of inadequate tissue perfusion, start 2nd IV access.<ul style="list-style-type: none">◦ IV NS 250ml boluses, may repeat to a maximum of 1000ml.</p> <p>Stable: BP>90mmHG and/or signs of adequate tissue perfusion.<ul style="list-style-type: none">◦ IV NS 500ml/hour</p> <ul style="list-style-type: none">• Treat pain as indicated <p>IV Pain Relief: Morphine Sulfate 5mg IV slowly and may repeat every 5 minutes to a maximum of 20mg when the patient maintains a BP>90mmHG and signs of adequate tissue perfusion. Document BP's every 5 minutes while medicating for pain and reassess the patient.</p> <p>IM Pain Relief: Morphine Sulfate 10mg IM. Document vital signs and reassess the patient.</p>

BLS Continued**Manage Special Considerations:**

Thermal Burns: Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.

Chemical Burns: Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.

Tar Burns: Cool with water, do not remove tar.

Electrical Burns: Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

Eye Involvement: Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.

ALS Continued

- Transport to appropriate facility:

Minor Burn Classification: transport to the closest most appropriate receiving hospital.

Moderate Burn Classification: transport to the closest most appropriate receiving hospital.

Major Burn Classification: transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).

CTP with associated burns: transport to the most appropriate trauma hospital.

- Burn patients with associated trauma, in which the burn injury poses the greatest risk of morbidity or mortality should be **considered** for transport to the closest most appropriate Burn Center. **Trauma base hospital contacted shall be made.**

- Insert nasogastric/orogastric tube as indicated

Manage Special Considerations:

Electrical Burns: Monitor for dysrhythmias, treat according to ACLS guidelines and ICEMA protocols.

- Electrical injuries that result in cardiac arrest shall be treated as medical arrests.

Respiratory Distress: Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.

- Nebulized Albuterol 2.5mg with Atrovent 0.5mg, may repeat two (2) times.

Deteriorating Vital Signs: Transport to the closest most appropriate receiving hospital. **Contact base hospital.**

BLS Continued

Determination of Death on Scene: Refer to Reference Protocol # 14007 Determination of Death on Scene.

ALS Continued

Pulseness and Apneic: Transport to the closest most appropriate receiving hospital and treat according to ACLS guidelines and ICEMA policies. Contact base hospital.

Determination of Death on Scene: Refer to Reference Protocol # 14007 Determination of Death on Scene.

Precautions and Comments:

- High flow oxygen is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
- Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
- Do not apply ice or ice water directly to skin surfaces, as additional injury will result.

Base Hospital Orders: May order additional:

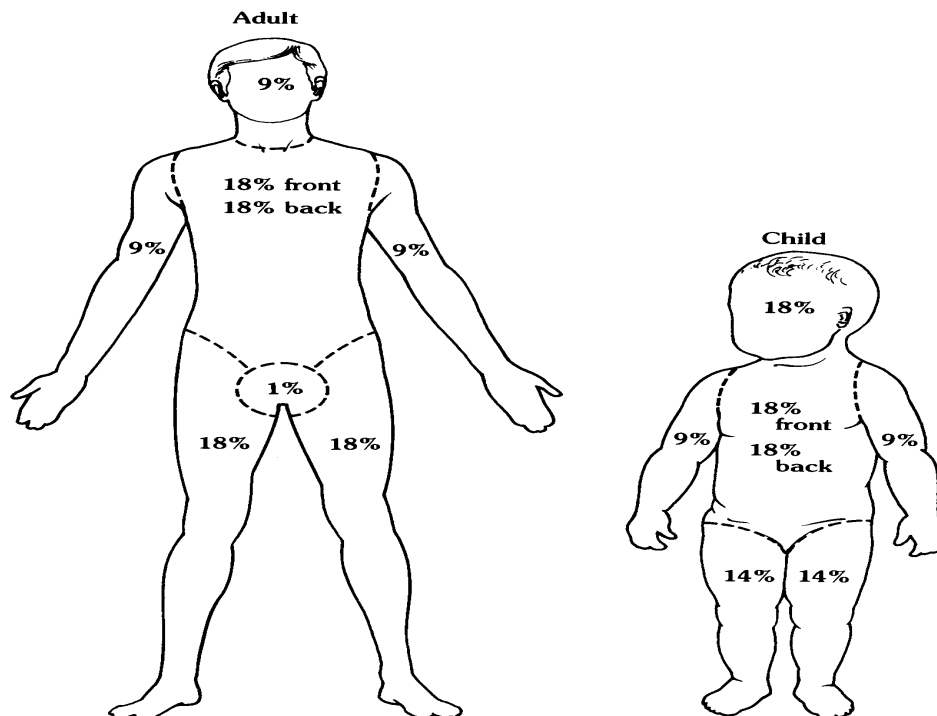
- medications;
- fluid boluses.

REFERENCE PROTOCOLS**Protocol
Number****Protocol Name**

1001	General Patient Care Guidelines
4001	External Jugular Vein Access
4009	Oral Endotracheal Intubation
4021	Insertion of Nasogastric/Orogastric Tube
4026	Intraosseous Infusion IO
4029	Nasotracheal Intubation
4030	Needle Cricothyrotomy
4035	Axial Spinal Stabilization
4050	Esophageal Tracheal Airway Device
6015	Adult Cardiac Arrest
8005	Trauma Triage Criteria and Destination Policy
9001	Burn Criteria and Destination Policy
14007	Determination of Death on Scene

BURN CLASSIFICATIONS

ADULT BURN CLASSIFICATION CHART	PEDIATRIC BURN CLASSIFICATION CHART	DESTINATION
<u>MINOR</u> – ADULT <ul style="list-style-type: none"> • < 10% TBSA • < 2% Full Thickness 	<u>MINOR</u> - PEDIATRIC <ul style="list-style-type: none"> • < 5% TBSA • < 2% Full Thickness 	CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL
<u>MODERATE</u> – ADULT <ul style="list-style-type: none"> • 10 - 20% TBSA • 2 - 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease) 	<u>MODERATE</u> - PEDIATRIC <ul style="list-style-type: none"> • 5 – 10% TBSA • 2 – 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease) 	CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL
<u>MAJOR</u> – ADULT <ul style="list-style-type: none"> • >20% TBSA burn in adults • > 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints 	<u>MAJOR</u> - PEDIATRIC <ul style="list-style-type: none"> • > 10% TBSA • > 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints 	CLOSEST MOST APPROPRIATE BURN CENTER In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)

“Rule of Nines”

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Mono Co. Health Officer Date

ICEMA Executive Director Date

PEDIATRIC BURNS

Less than 15 Years of Age

Any burn patient meeting Burn Classifications requires expeditious packaging, communication, and transportation to the closest most appropriate receiving hospital.

FIELD ASSESSMENT/TREATMENT INDICATORS

Burn Criteria and Destination Policy #9001

PEDIATRIC TREATMENT PROTOCOL: BURNS

Base Hospital Contact Shaded in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<ul style="list-style-type: none">• Assess environment and extrication as indicated• Break contact with causative agent (stop the burning process)• Ensure patent airway, protecting cervical spine as indicated• Remove clothing and jewelry quickly, if indicated• Ensure thorough initial assessment• Oxygen and/or ventilate as needed, O₂ saturation (if BLS equipped)• Axial spinal stabilization as appropriate• Treat other life threatening injuries• Keep patient warm• Estimate % TBSA burned and depth using the "Rule of Nines"<ul style="list-style-type: none">○ An individual's palm represents 1% of TBSA and can be used to estimate scattered, irregular burns• Transport to ALS intercept or to the closest most appropriate receiving hospital• Assemble necessary equipment for ALS procedures under direction of EMT-P and/or assemble pre-load medications as directed, excluding controlled substances.	<ul style="list-style-type: none">• Advanced airway as indicated <p>Airway Stabilization: Burn patients with respiratory compromise, or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.</p> <ul style="list-style-type: none">• Monitor ECG• IV/IO Access: Moderate to Severe Burns. Warm IV fluids when available. <p>Unstable: Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2nd IV access.</p> <ul style="list-style-type: none">○ Administer 20ml/kg NS bolus IV/IO, may repeat once. <p>Stable: Vital signs (age appropriate) and/or signs of adequate tissue perfusion.</p> <p>≤ 5 years of age</p> <ul style="list-style-type: none">○ IV NS 150ml/hour <p>> 5 years of age - < 15 years of age</p> <ul style="list-style-type: none">○ IV NS 250ml/hour <ul style="list-style-type: none">• Treat pain as indicated: <p>IV Pain Relief: Morphine Sulfate 0.1mg/kg IV/IO slowly, do not exceed 5mg increments, may repeat every 5 minutes to a maximum of 20mg IV/IO when the patient maintains age appropriate vital signs and adequate tissue perfusion. Document vital signs every 5 minutes while medicating for pain, and reassess the patient.</p>

BLS Continued**Manage Special Considerations:**

Thermal Burns: Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.

Chemical Burns: Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.

Tar Burns: Cool with water, do not remove tar.

Electrical Burns: Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

Eye Involvement: Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.

ALS Continued

IM Pain Relief: Morphine Sulfate 0.2mg/kg IM, 10mg IM maximum. Document vital signs and reassess the patient.

- Transport to appropriate facility:

Minor Burn Classification: transport to the closest most appropriate receiving hospital.

Moderate Burn Classification: transport to the closest most appropriate receiving hospital.

Major Burn Classification: transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).

CTP with associated burns: transport to the most appropriate trauma hospital.

- Burn patients with associated trauma, in which the burn injury poses the greatest risk of morbidity or mortality should be **considered** for transport to the closest most appropriate Burn Center. **Trauma base hospital contacted shall be made.**
- Insert nasogastric/orogastric tube as indicated

Manage Special Considerations:

Electrical Burns: Monitor for dysrhythmias, treat according to PALS guidelines and ICEMA policies.

- Electrical injuries that result in cardiac arrest shall be treated as medical arrests.

Respiratory Distress: Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.

- 1 day to 12 months old – Nebulized Albuterol 2.5mg with Atrovent 0.25mg, may repeat two (2) times.
- 1 year to < 15 years old – Albuterol 2.5mg with Atrovent 0.5mg, may repeat two (2) times.

BLS Continued

Determination of Death on Scene: Refer to Reference Protocol # 14007 Determination of Death on Scene.

ALS Continued

Deteriorating Vital Signs: Transport to the closest most appropriate receiving hospital. Contact base hospital.

Pulseness and Apneic: Transport to the closest most appropriate receiving hospital and treat according to PALS guidelines and ICEMA protocols. Contact base hospital.

Determination of Death on Scene: Refer to Reference Protocol # 14007 Determination of Death on Scene.

Precautions and Comments:

- High flow oxygen, appropriate for age, is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
- Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
- Do not apply ice or ice water directly to skin surfaces as additional injury will result.
- Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

Base Hospital Orders: May order additional:

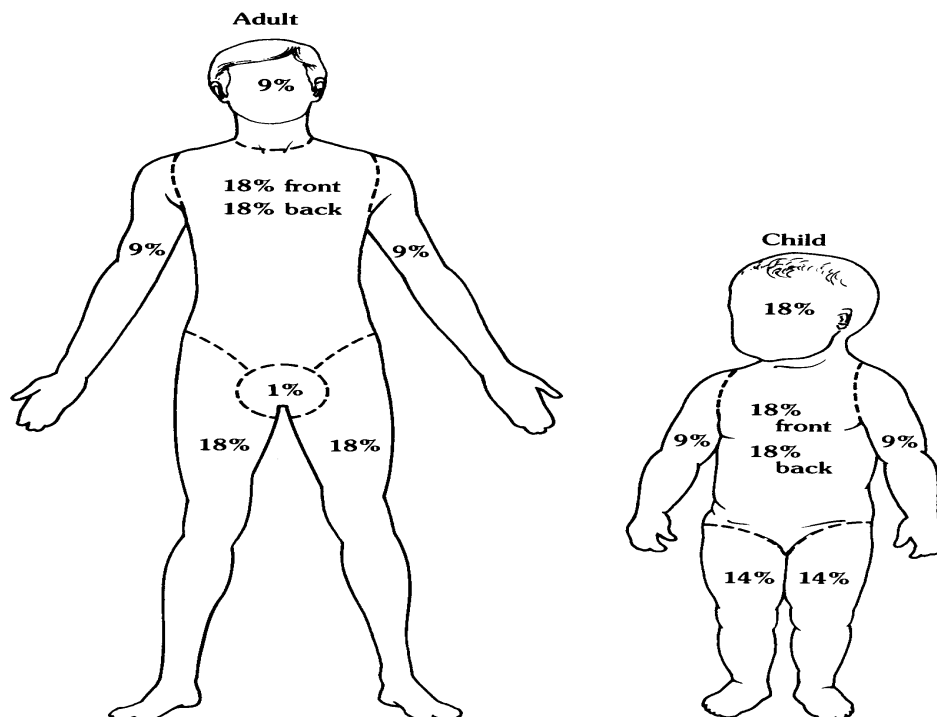
- medications;
- fluid boluses.

REFERENCE PROTOCOLS**Protocol Number****Protocol Name**

1001	General Patient Care Guidelines
4011	Oral Endotracheal Intubation - Pediatric
4021	Insertion of Nasogastric/Orogastric Tube
4023	Needle Thoracostomy
4026	Intraosseous Infusion IO
4030	Needle Cricothyrotomy
4035	Axial Spinal Stabilization
7001	Pediatric Cardiac Arrest
7007	Pediatric Altered Level of Consciousness
8005	Trauma Triage Criteria and Destination Policy
9001	Burn Criteria and Destination Policy
14004	Reporting Incidents of Suspected Child, Dependent Adult, or elder Abuse/Neglect
14007	Determination of Death on Scene

BURN CLASSIFICATIONS

ADULT BURN CLASSIFICATION CHART	PEDIATRIC BURN CLASSIFICATION CHART	DESTINATION
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